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ANOLE Portable Radiation Detection System Field Test and Evaluation Campaign

Chris A. Hodge, Ph.D.
Remote Sensing Laboratory
National Security Technologies, LLC
P.O. Box 98521, MS RSL-44, Las Vegas, NV 89193
Email: hodgeca@nv.doe.gov Tel: (702)794-1651

Abstract

Handheld, backpack, and mobile sensors are elements of the Global Nuclear Detection System for the interdiction and control of illicit radiological and nuclear materials. They are used by the U.S. Department of Homeland Security (DHS) and other government agencies and organizations in various roles for border protection, law enforcement, and nonproliferation monitoring. In order to systematically document the operational performance of the common commercial off-the-shelf portable radiation detection systems, the DHS Domestic Nuclear Detection Office conducted a test and evaluation campaign conducted at the Nevada Test Site from January 18 to February 27, 2006. Named "Anole," it was the first test of its kind in terms of technical design and test complexities. The Anole test results offer users information for selecting appropriate mission-specific portable radiation detection systems. The campaign also offered manufacturers the opportunity to submit their equipment for independent operationally relevant testing to subsequently improve their detector performance. This paper will present the design, execution, and methodologies of the DHS Anole portable radiation detection system test campaign.

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